

Stratford District Council
Water Treatment Plants
Monitoring Programme
Annual Report
2017-2018

Technical Report 2018-25

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Executive summary

The Stratford District Council (SDC) operates three water treatment plants (WTP's) in the Stratford district that supply water to Stratford, Midhirst, and Toko. This report for the period July 2017 to June 2018 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess SDC's environmental performance during the period under review, and the results and environmental effects of SDC's activities.

SDC currently holds nine resource consents in relation to water supplies, which include a total of 64 conditions setting out the requirements that the consent holder must satisfy. SDC holds four consents to allow it to take and use water, three consents to discharge filter backwash, and two consents to maintain an in-stream structure.

During the monitoring period, SDC demonstrated an overall good level of environmental performance.

The Council's monitoring programme for the year under review included an annual inspection of all of SDC's plants, weirs and discharges, a review of abstraction data, and collection of a sample from the Stratford WTP's backwash pond.

During the monitoring period SDC complied with all abstraction and discharge limits, and all abstraction data was provided in timely manner. Toko water supply still has minor issues in regards to how abstraction rates were measured, however a compliance plan was put in place to rectify this.

During the year, the SDC demonstrated a good level of environmental performance and a good level of administrative performance.

For reference, in the 2017-2018 year, consent holders were found to achieve a high level of environmental performance and compliance for 76% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 20% of the consents, a good level of environmental performance and compliance was achieved.

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the SDC's performance has improved in the year under review.

This report includes recommendations for the 2018-2019 year.

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1 Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is the Annual Report for the period July 2017 to June 2018 by the Taranaki Regional Council (the Council) describing the monitoring programme associated with resource consents held by Stratford District Council (SDC) for its water treatment plants (WTP's). SDC operates three public WTP's servicing the Stratford, Midhirst and Toko areas.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by SDC that relate to abstractions and discharges of water, and the maintenance of in-stream structures for its water treatment plants. This is the 21st Annual Report to be prepared by the Council to cover SDC's water abstractions, discharges and their effects.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about:

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by SDC in relation to its WTP's;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted at SDC's WTP's and associated structures.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretations, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2018-2019 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act 1991 and monitoring

The RMA primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- a. the neighbourhood or the wider community around an activity, and may include cultural and social-economic effects;
- b. physical effects on the locality, including landscape, amenity and visual effects;
- c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- d. natural and physical resources having special significance (for example recreational, cultural, or aesthetic); and
- e. risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each activity. Monitoring programmes are not only based on existing permit conditions, but also on the

obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by SDC during the period under review, this report also assigns them a rating for their environmental and administrative performance during the period under review.

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the consent holders' approach to demonstrating consent compliance in site operations and management including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder and unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

Environmental Performance

High: No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving significant environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.

Good: Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self reports, or in response to unauthorised incident reports, but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time;
- Strong odour beyond boundary but no residential properties or other recipient nearby.

Improvement required: Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.

Poor: Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative performance

High: The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.

Good: Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

Improvement required: Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.

Poor: Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.

For reference, in the 2017-2018 year, consent holders were found to achieve a high level of environmental performance and compliance for 76% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 20% of the consents, a good level of environmental performance and compliance was achieved.

1.2 Process description

1.2.1 Stratford water supply

The municipal water supply is extracted from the Patea River (main supply) and the Konini Stream (auxiliary supply) by means of weirs on these watercourses. At the Cardiff Road water treatment plant water is filtered using membrane filters and then treated with chlorine and fluoride for domestic supply before being pumped to a nearby reservoir. The water supply is reticulated to approximately 2,300 separate customers.

Filter backwash is discharged via a large pond. The outlet from the pond is an inverted pipe located at the opposite end of the pond from the inlet. The discharge from the pond emerges from a pipe to fall over a small waterfall. At the base of the waterfall the discharged water runs down a natural cobbled channel beneath native riparian vegetation for approximately 10 metres before entering the Patea River, downstream of the intake weir.

1.2.2 Midhirst water supply

The Midhirst community WTP was originally supplied the former Midhirst dairy factory. Water is pumped from the Te Popo Stream (through a small filter attached to a flexible hose within the stream), to a settling tank at the treatment plant. After settling the water is filtered and treated with chlorine. Once treated, the water is pumped to a reservoir, which has a probe switch to initiate pumping at the treatment plant when the water level in the reservoir is low. The reservoir is believed to have capacity for five days' water for the Midhirst community. From the reservoir, the treated water returns to the treatment plant where a booster

pump drives it into the Midhirst reticulation system at an acceptable mains pressure. A large storage tank onsite acts as a reservoir for firefighting.

1.2.3 Toko water supply

The Toko rural water supply was originally the water supply for the former Toko dairy factory. Water is pumped from a bore to a small shed where it is chlorinated and then filtered. After it has been filtered, the water is pumped to two tanks on a hill above Toko. The tanks have probe switches to initiate pumping when the water levels in the tanks are low. The pumps are operated so as to work gradually for longer periods rather than at high rates for short periods. The filter is backwashed once per week to a series of two soak holes.

1.3 Resource consents

SDC holds various resource consents for the WTP's and structures that it operates, including water abstraction permits, discharge permits and land use consents. These consents are listed in Table 1 and described in more detail in sections 1.3.1 to 1.3.3. Copies of all resource consents associated with the SDC water supply operations are attached to this report as Appendix I..

Table 1 Summary of current consents held by SDC in relation to public water supplies

Consent No	Description	Expiry Date	Next Review Date	Status
0068-4.0	To discharge settled filter backwash water from the Stratford Municipal Water Treatment Plant via a settling pond into the Patea River	01 Jun 2034	June 2022	Current
0195-3.0	To take and use water from the Patea River and the Konini Stream to provide a public water supply to Stratford	01 Jun 2034	June 2019	Current
1276-3	To take water from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes	01 Jun 2021	-	Current
1331-3.0	To discharge treated filter backwash water from the Midhirst Water Treatment Plant onto land via a soak hole	01 Jun 2033	June 2021	Current
1337-3	To take and use groundwater from a bore in the vicinity of the Toko Stream in the Patea catchment for Toko rural water supply purposes	01 Jun 2022	-	Current
2452-3.0	To dam water in the Konini Stream with a 1 metre concrete weir for the Stratford town water supply	01 Jun 2034	June 2019	Current
5353-2.0	To dam water in the Patea River with a 2.3 metre concrete weir for the Stratford town water supply	01 Jun 2034	June 2019	Current
6549-1	To repair and maintain an existing weir structure in the Konini Stream a tributary of the Paetahi Stream in the Patea catchment	01 Jun 2022	-	Current
6605-1.1	To discharge treated filter backwash water from the Toko Water Treatment Plant into a soak hole adjacent to the Manawawiri Stream	01 Jun 2022	-	Current

Consent No	Description	Expiry Date	Next Review Date	Status
0068-4.0	To discharge settled filter backwash water from the Stratford Municipal Water Treatment Plant via a settling pond into the Patea River	01 Jun 2034	June 2022	Current

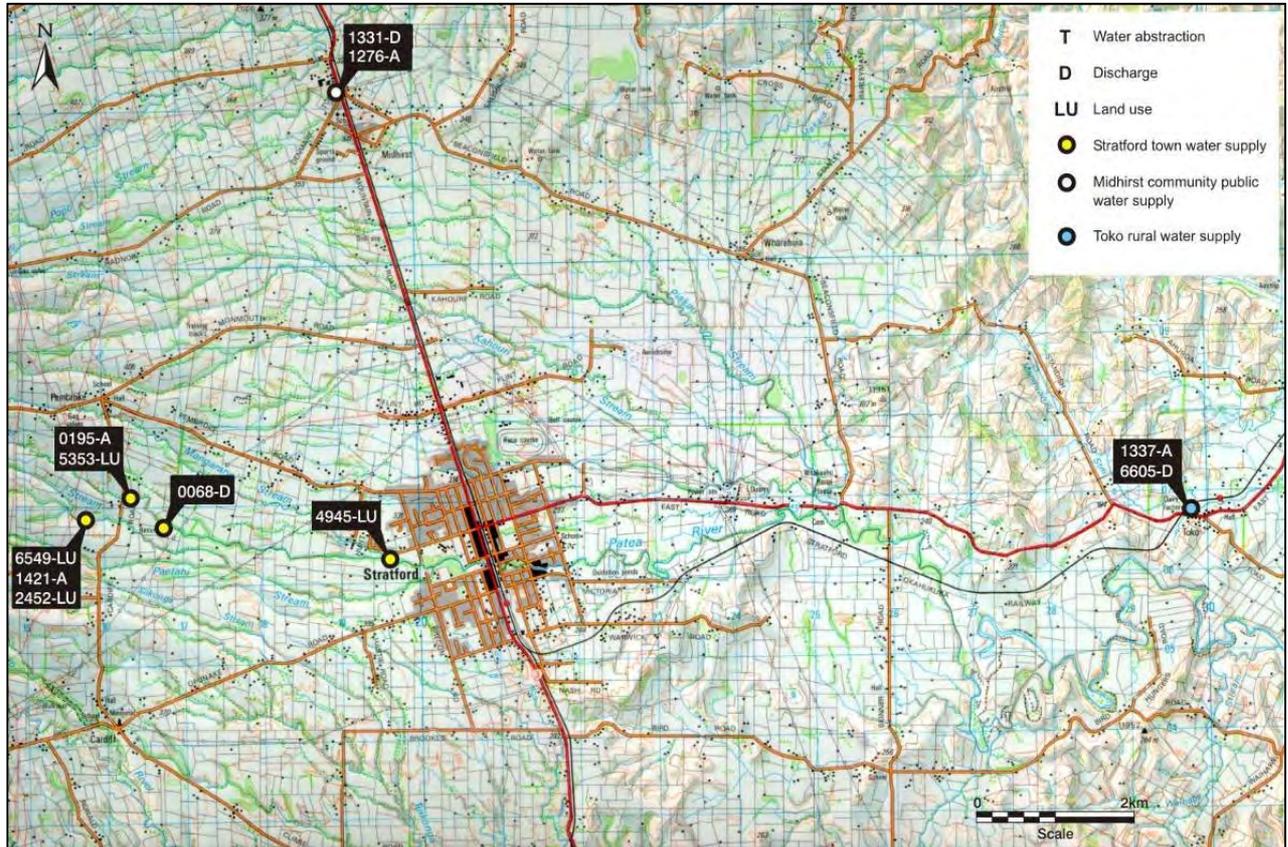


Figure 1 Location of water supply consents in Stratford District

1.3.1 Water abstraction permits

Section 14 of the RMA stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14.

SDC holds water permit **1276-3** to take water from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes. This permit was issued by the Council on 9 June 2003 under Section 87(d) of the RMA. It is due to expire on 1 June 2021.

SDC holds water permit **1337-2** to take water from a bore in the vicinity of Toko Stream in the Patea catchment for rural water supply purposes. This permit was renewed on 17 June 2005 under Section 87(d) of the RMA. It is due to expire on 1 June 2022.

SDC holds water permit **0195-3** to take and use water from the Patea River and Konini Stream for Stratford town water supply purposes. This permit was issued by the Council on 17 October 2017 and will expire on 1 June 2034. An application to renew this consent was received and it continues to be exercised under Section 124 of the RMA.

SDC held water permit **1421-2** to take and use water from the Konini Stream to supplement the Stratford town water supply. This permit was issued by the Council on 20 July 1998 under Section 87(d) of the RMA and was reviewed in August 2004 to clarify abstraction rates. It expired on 1 June 2016. This consent has now been superseded by consent **0195-3**

Each consent generally contains standardised conditions that;

- set abstraction rates and or volumes
- require abstractions to be measured
- require abstraction data be provided to the Council
- set specific abstraction allowances during low periods
- set out review and lapse provisions

A condition requiring a leak detection and water conservation report is included in consent 1276-3 (Te Popo stream take), and financial contributions conditions are also included in consents 1276-3 and 0195-3 (Patea River take).

1.3.2 Water discharge permits

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

SDC holds water discharge permit **1331-3** to discharge treated filter backwash water from the Midhurst Water Treatment Plant into the Te Popo Stream in the Waitara Catchment via a soak hole. This permit was issued by the Council on 27 May 2016 under Section 87(e) of the RMA. The consent is due to expire on 1 June 2033.

SDC holds water discharge permit **0068-4** to discharge settled filter backwash water from the Stratford municipal WTP via a settling pond into the Patea River. This permit was issued by the Council on 24 June 2016 under Section 87(e) of the RMA. It is due to expire on 1 June 2034.

SDC holds water discharge permit **6605-1** to discharge treated filter backwash water from the Toko Water Treatment Plant into the Toko Stream in the Patea catchment via soak holes. This permit was issued by the Council on 29 April 2005 under Section 87(e) of the RMA. It is due to expire on 1 June 2022.

Each of these consents generally contain standardised conditions that;

- limit the concentration of suspended solid and/or free available chlorine
- limits the volume of the discharge (Toko and Midhurst WTP's only)
- limits the effects in receiving waters
- require the maintenance of treatment measures
- set out lapse and review conditions

1.3.3 Land use permits

Section 13(1)(a) of the RMA stipulates that no person may in relation to the bed of any lake or river use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

SDC holds land use consent **2452-3** to dam the Konini Stream in the Patea catchment for the Stratford town water supply. The consent was issued by the Council on 25 September 2017 under Section 87(a) of the RMA and will expire on 1 June 2034.

SDC holds land use consent **6549-1** to repair and maintain an existing weir structure in the Konini Stream, a tributary of the Paetahi Stream in the Patea catchment. The consent was issued by the Council on 21 September 2004 under Section 87(a) of the RMA. It is due to expire on 1 July 2021.

SDC holds land use consent **5353-2** to dam the Patea River for the Stratford town water supply. The consent was issued by the Council on 25 September 2017 under Section 87(a) of the RMA and will expire on 1 June 2034.

These consents require the structure to provide of fish passage and require the maintenance of fish passage structures. Consent 6459 (to undertake maintenance of the Konini weir) also sets out requirements for notification of works, timeframes for works and limits effects in the stream as a result of works.

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consents which are appended to this report.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets out obligations upon the Council to gather information, monitor, and conduct research on the exercise of resource consents, and the effects arising, within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report upon them.

The Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations, and seek information from consent holders.

The monitoring programme for SDC's water treatment plants consisted of four primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- in discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans and;
- consultation on associated matters.

1.4.3 Site inspections

All of SDC's WTP's, and their associated structures, were each visited once during the monitoring period. With regard to consents for the abstraction of, or discharge to water, the main points of interest were back wash discharges, intake structures, and water metering equipment. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council.

1.4.4 Chemical sampling

The backwash discharge at the Stratford WTP was sampled once, and the sample analysed for free available chlorine, pH, suspended solids and turbidity.

1.4.5 Data review

All of the water abstraction consents held by the SDC in regard to WTP's contain a condition which requires SDC to keep records of abstraction volumes and make these records available to the Council upon request. Currently live data from Stratford, Midhurst, and Toko WTP's is being telemetered to Council databases. All data is reviewed to assess compliance in regard to volumes and abstraction rates of water taken and, where available, flow conditions of the source stream or river. Discharge quality records from Stratford WTP were also reviewed.

2 Results

2.1 Inspections

Each site was visited on 11 January 2018. Inspections focussed on flow meters, abstraction rates/volumes, discharges, and where applicable the condition of weirs and fish passes.

2.1.1 Midhurst WTP

The plant was abstracting 2.7 L/s at the time of the inspection and this matched the telemetered data. No issues were noted with soakage pits and there were no discharges to the stream.

2.1.2 Stratford WTP

The discharge pond was inspected and it was found that a discharge of approximately 3 L/s was occurring. This appeared clean and clear. Discussions were held in regard to access to the outfall. Stairs had been installed it was outlined that a track would be cut provide better access to the outfall. The plant was abstracting 14 L/s from the Konini Stream and 17 L/s from the Patea. This was in compliance with consent conditions and matched the telemetered data. The Konini weir appeared to be working well. Repairs had been made to the central area of the weir and boards had been installed. The fish pass was working well and clear of debris. No issues were noted at the Patea weir.

2.1.3 Toko WTP

The plant was abstracting 1.4 L/s at the time of the inspection and this matched the telemetered data. A review of the data to date showed that the plant was compliant with abstraction rates and volumes. No issues were noted with soakage pits and no discharges to the stream were occurring. It was outlined that a much larger soakage pit was to be dug. It was noted that the abstraction rates were still being measured via the plant outflow meter as the meter at the head-works was entraining air. It was outlined that another meter would be installed further up the raw water supply pipe to address this.

2.2 Results of discharge monitoring

A sample of the filter backwash discharge from the Stratford WTP settling pond was collected on 11 January 2018.

Table 2 Sample from backwash pond at Stratford (site STW0002034)

Parameter	Unit	Result	Consent 0068-3 limits
Free chlorine	g/m ³	0.09	0.1
pH	pH	8.6	-
Suspended solids	g/m ³	20	20
Turbidity	NTU	5.6	-

A sample was taken of the discharge as it entered the pond outlet and this was found to be within the limits set by consent conditions (Table 2). SDC also samples this discharge on a monthly basis and these results are shown in Table 3.

Table 3 Results of SDC's self-monitoring of Stratford WTP discharge pond

Date	Free available chlorine g/m ³	Suspended solids g/m ³	Compliance
24/07/2017	nd	0.12	Yes
18/08/2017	nd	0.16	Yes
30/08/2017	0.03	0.12	Yes
19/09/2017	nd	0.19	Yes
05/10/2017	nd	1.05	Yes
31/10/2017	nd	0.88	Yes
08/11/2017	nd	1.1	Yes
29/11/2017	nd	0.35	Yes
15/12/2017	nd	1.1	Yes
08/01/2018	nd	0.32	Yes
15/02/2018	nd	0.22	Yes
22/03/2018	nd	0.22	Yes
05/04/2018	nd	0.3	Yes
10/05/2018	nd	0.4	Yes
22/6/2017	nd	0.21	Yes

Key: nd= not detected

2.3 Abstraction data

SDC provided data from all three plants during the monitoring period via telemetry. The data was assessed against either daily volumes and /or instantaneous take rates depending on consent conditions. A summary of compliance in regard to abstraction data is given in Table 4.

Table 4 Summary of compliance with abstraction data and abstraction limits

Site	Consent	Records supplied on time?	% Compliance daily volumes	% Compliance abstraction rate	% Completeness of data
Stratford (Patea)	0195-2*	Yes	N/A	100	100
Stratford (Patea)	0195-3*	Yes	N/A	100	100
Stratford (Konini)	1421-2* & 0195-3	Yes	N/A	100	100
Midhurst	1276-3	Yes	100	100	100
Toko	0337-3	Yes	97% ¹	100 ¹	100 ¹

* 0195-2 expired 16 October 2017 and was replaced by 0195-3. 1421-2 also expired and was superseded by 0195-3

¹ Water meter at head of bore experiences disruption due to air in the water line. Figures based on supply line.

During the year SDC demonstrated a good level of compliance in regard to abstraction rates/ volumes and provision of data.

2.4 Spawning survey

Council staff, in conjunction with Fish and Game, undertake a fish spawning survey on a triennial basis in the Konini Stream to assess the effectiveness of the fish pass. This was last undertaken in 2017 and is due again in 2020.

2.5 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

The Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The incident register includes events where the Company concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified company is indeed the source of the incident (or that the allegation cannot be proven).

In the 2017-2018 period, the Council was not required to record incidents or undertake enforcement in association with the SDC water treatment activities.

3 Discussion

3.1 Discussion of SDC performance

Overall SDC demonstrated a good level of performance in relation to its WTP's. No issues were noted in regards to abstraction rates, discharges, recording equipment or effects in the receiving water.

The Toko water supply is not compliant with NES regulations as the meter is measuring abstraction after treatment and not necessarily accounting for water used for back washing. Council noted that the whilst the consented take is 5.6 L/s (over the 5.0 L/s NES threshold), that the abstraction rarely exceeded 2.0 L/s. Council is working with SDC on a compliance plan to address this outstanding issue. It has been outlined that a new meter will be installed.

3.2 Environmental effects of exercise of consents

The backwash pond at the Stratford WTP was sampled and found to comply with consent conditions and no effects were observed in the Patea River during inspection.

The weir in the Patea River is likely to present a barrier to the passage of trout within the river. However, this effect may be beneficial in providing a trout-free reserve for native fish upstream of the weir. Consent 5353-1 required the installation of a structure at the weir that provides unrestricted passage of fish by 1 July 2005. However, as a requirement of the new consents granted for the Patea hydro-electric dam (located downstream of the weir), 'target species' juveniles are to be manually transferred into the headwaters of the Patea Catchment from the lower river. One of the release sites is located immediately upstream of the weir. The requirement for a fish pass at the weir is therefore currently on hold. The success of the upstream transfer programme will be assessed in approximately five years' time, at which point, it will be determined whether this fish pass requirement should remain on hold. If the transfer of juvenile fish into the headwaters is abandoned, it is likely that a fish pass will need to be installed.

The report on the spawning survey of the Konini Stream concluded that recent low flows may have reduced the effectiveness of the fish pass and recommended that passage could be improved by placing boulders at the foot of the structure to create a back flow.

Monitoring of the Toko and Midhirst WTP's indicated that these plants were not having any adverse effects on the environment.

Overall no significant adverse effects were noted during the monitoring period.

3.3 Evaluation of performance

A tabular summary of the SDC compliance record for the year under review is set out in Tables 5 to 15.

3.3.1 Stratford WTP

Table 5 Summary of performance for consent 0068-4

Purpose: To discharge settled filter backwash water from the Stratford municipal WTP via a settling pond into the Patea River		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practice	Inspection	Yes

Purpose: To discharge settled filter backwash water from the Stratford municipal WTP via a settling pond into the Patea River		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
2. Discharge not to cause certain effects in the Patea River below the mixing zone	Inspection and sampling	Yes
3. Limits on pH, suspended solids and chlorine in the discharge	Sampling	Yes
4. Provide access to discharge point	Inspection	Yes
5. Optional review provision	Not scheduled for consideration during year under review. Next consideration June 2022	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 6 Summary of performance for Consent 0195-2 (to 16 October 2017)

Purpose: To take and use water from the Patea River for Stratford town water supply purposes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Recording of abstraction rates and provision of data to Council	Data provided upon request	Yes
2. Limit on abstraction rates during normal flows	Data review	Yes
3. Requirement to reduce abstraction when Patea flow is less than 725 L/s	Data review	Yes
4. Ability to maintain maximum abstraction rate to establish reservoir storage following plant failure	Liaison with consent holder – not exercised	N/A
5. Implementation of water conservation measures when flow in Patea at or below MALF	Liaison with consent holder and monitoring of stream flows	Yes
6. Mitigation of effects by riparian planting	Planting carried out as required in previous years	Yes
7. Right of Council to suspend or reduce abstraction during extreme low flows	Not required during monitoring period	N/A
8. Optional review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 7 Summary of performance for Consent 0195-3 (from 16 October 2017)

Purpose: To take and use water from the Patea River and the Konini Stream to provide a public water supply to Stratford		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on abstraction rates during normal flows	Data provided upon request	Yes
2. Extra taking allowed during reservoir refilling	Liaison with consent holder	N/A
3. Notification when take exceeds 61 L/s under condition 2	Liaison with consent holder	Yes
4. Implementation of water conservation measures/restrictions when flow in Patea at or below certain flows	Liaison with consent holder	N/A
5. Undertake low flow gaugings and establish rating curve	Monitoring programme	Yes
6. Install abstraction meter and data logger	Inspection	Yes
7. Certification and verification of equipment	NES verification	Yes
8. Notification of equipment failure	Data review	N/A
9. Equipment to be accessible to Council staff	Inspection	Yes
10. Records to be telemetered to Council database	Data review	Yes
11. Provide report on leak detection and conservation by 1 September annually	Review of report	Not yet due at time of writing- last year's report supplied
12. Annual financial contributions to mitigation measures	Review of accounts	Yes
13. Intakes to screened to prevent entrainment of fish	Inspection	Yes
14. Review condition	No review sought by Council	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 8 Summary of performance for Consent 1421-2 (to 16 December 2017- now superseded)

Purpose: To take and use water from the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for Stratford town water supply purposes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Recording of abstraction rates and provision of data to Council	Data provided upon request	Yes
2. Limit on abstraction rates	Review abstraction data	Yes
3. Implementation of water conservation measures when flow in Patea at or below MALF	Liaison with consent holder and monitoring of stream flows	Yes
4. Right of Council to suspend or reduce abstraction during extreme low flows	Not required during monitoring period	N/A
5. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 9 Summary of performance for Consent 5353-2 (from 25 January 2018)

Purpose: To dam water in the Patea River with a 2.3 metre concrete weir for the Stratford town water supply		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Maintain the weir so that it remains sound and fit for purpose	Inspection	Yes
2. Repair any erosion or scour of the river bed or banks caused by the weir and take reasonable steps to stop it recurring.	Inspection	Yes
3. Optional review provision re environmental effects	No review sought by Council	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 10 Summary of performance for Consent 2452-2 (from 25 January 2018)

Purpose: To dam water in the Konini Stream with a 1 metre concrete weir for the Stratford town water supply		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Maintain the weir so that it remains sound and fit for purpose	Inspection	Yes
5. Repair any erosion or scour of the river bed or banks caused by the weir and take reasonable steps to stop it recurring	Inspection	Yes
6. The weir shall not restrict the passage of native fish or juvenile or adult trout.	Triennial spawning survey	Not assessed this period
7. Optional review provision re environmental effects	No review sought by Council	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 11 Summary of performance for Consent 6549-1

Purpose: To repair and maintain an existing weir structure in the Konini Stream a tributary of the Paetahi Stream in the Patea catchment		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Notify Council prior to works.	Notification received	Yes
2. Any instream works shall take place only between 1 November and 30 April inclusive, except where this requirement is waived in writing by the Chief Executive, Taranaki Regional Council.	Inspections	Yes
3. Adopt best practice.	Inspection	Yes
4. Minimisation of stream bed disturbance during works	Inspection	Yes.
5. Exercise consent in as per application documents	Inspection	Yes
6. Shall not cause erosion of the river channel.	Inspection	Yes
7. Limits on effects in stream	Inspection and sampling if required	Yes
8. Review condition	No further review options	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

3.3.2 Midhurst WTP

Table 12 Summary of performance for Consent 1276-3

Purpose: To take water from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhurst community public water supply purposes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Exercise of consent in accordance with information submitted in support of application	Inspection and liaison with consent holder	Yes
2. Adoption of best practicable option	Inspection and liaison with consent holder	Yes
3. Limit on abstraction rate	Abstraction data provided	Yes
4. Average monthly rate of abstraction not to exceed 254 m ³ /day between November-March	Abstraction data provided	Yes
5. Rate of abstraction not to exceed 432 m ³ /day between April-October	Abstraction data provided	Yes
6. Total amount of water taken not to exceed 90,000 m ³	Abstraction data provided	Yes
7. Annual Report on leaks and water efficiency and conservation	Report not due at time of writing report. Report provided each year since 2011	N/A
8. Screening of intake structures	Inspection	Yes
9. Abstraction data provided	Review of data	Yes
10. Monitoring of flows – no extreme low flows in monitoring year	Monitoring of flows	N/A
11. Review condition	No further option to review	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

Table 13 Summary of performance for Consent 1331-3

Purpose: To discharge treated filter backwash water from the Midhurst WTP into the Te Popo Stream in the Waitara Catchment via a soak hole		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on discharge rates	Inspection and review of data	Yes

2. Proper and efficient maintenance of soak hole system	Inspection	Yes
3. Optional review provision	Next option to review in June 2021	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

3.3.3 Toko WTP

Table 14 Summary of performance for Consent 1337-3

Purpose: To take and use groundwater from a bore in the vicinity of the Toko Stream in the Patea catchment for Toko rural water supply purposes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option	Inspection/ Review of data	Yes
2. Consent to be exercised in accordance with the application	Inspection/ Review of data	Yes
3. Notification of Council prior to exercise of consent	Not applicable	N/A
4. Limit on abstraction rate and volume	Review abstraction data	Yes
5. Installation and operation of meter to record abstraction volumes and provide data	Supply meter used for abstraction monitoring-compliance plan in place to install new meter	No- meter not situated in correct place
6. Lapse provision	Not applicable	N/A
7. Optional review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		Good
Overall assessment of administrative performance in respect of this consent		Good

N/A = not applicable

Table 15 Summary of performance for Consent 6605-1

Purpose: To discharge treated filter backwash water from the Toko WTP into the Toko Stream in the Patea catchment via soak holes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on discharge volume	Review of data supplied	Yes
2. Maintenance and operation of soak hole system to ensure compliance with consent conditions	Inspection	Yes
3. Discharge not to cause certain effects in the Toko Stream below the mixing zone	Inspection	Yes
4. Limit on chlorine in the discharge	Not sampled in this monitoring period	N/A
5. Optional review provision	Next option for review in June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable

During the year, the SDC demonstrated a good level of environmental performance with the resource consents and a good level administrative performance is required.

3.4 Recommendation from the 2016-2017 Annual Report

In the 2016-2017 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of consented activities at Stratford District Council's water treatment plants in the 2017-2018 year continue at the same level as in 2016-2017 with the exception of the triennial fish survey now due in the 2019-2020 monitoring period.
2. THAT should there be issues with environmental or administrative performance in 2017-2018, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

These recommendations were implemented in full.

3.5 Alterations to monitoring programmes for 2018-2019

In designing and implementing the monitoring programmes for air/water discharges in the region, the Council has taken into account:

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

The Council also takes into account the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki exercising resource consents.

It is proposed that for 2018-2019 that the programme remains unchanged from that of 2017-2018.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the sites in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2018-2019.

3.6 Exercise of optional review of consent

Resource consents 2542-3, 5353-2, and 0195-3 provide for an optional review of the consent in June 2019. Consent conditions allow the Council to review the consents, for the purposes of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of the resource consents, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are no grounds that require the review options to be pursued.

4 Recommendations

1. THAT in the first instance, monitoring of consented activities at Stratford District Council's water treatment plants in the 2018-2019 year continue at the same level as in 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. That the review of consents, 2542-3, 5353-2, and 0195-3 not be pursued on the grounds that the current conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

Conductivity	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m.
Cumec	A volumetric measure of flow- 1 cubic metre per second (1 m ³ s ⁻¹).
Fresh	Elevated flow in a stream, such as after heavy rainfall.
Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Intervention	Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident.
IR	The Incident Register contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.
L/s	Litres per second.
MALF	mean annual low flow (of a river or stream)
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
O&G	Oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons).
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Physicochemical	Measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	<i>Resource Management Act</i> 1991 and including all subsequent amendments.
Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.

For further information on analytical methods, contact the Science Services Manager.

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Appendix I

Resource consents held by Stratford District Council

(For a copy of the signed resource consent
please contact the TRC Consents department)

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
PO Box 320
Stratford 4352

Decision Date: 24 June 2016

Commencement Date: 24 June 2016

Conditions of Consent

Consent Granted: To discharge settled filter backwash water from the Stratford Municipal Water Treatment Plant via a settling pond into the Patea River

Expiry Date: 1 June 2034

Review Date(s): June 2022, June 2028

Site Location: 296 Cardiff Road, Cardiff

Grid Reference (NZTM) 1706560E-5645161N

Catchment: Patea

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of contaminants from the site.
2. After allowing for a mixing zone of 50 metres downstream of the discharge point (at approximately 1706560E-5645161N), the discharge shall not give rise to any of the following effects in the Patea River:
 - (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - (b) any conspicuous change in the colour or visual clarity;
 - (c) any emission of objectionable odour;
 - (d) the rendering of fresh water unsuitable for consumption by farm animals; and
 - (e) any significant adverse effects on aquatic life.
3. Constitutes of the discharge shall meet the standards shown in the following table.

Constituent	Standard
Suspended solids	Concentration not greater than 20 gm ⁻³
Free available chlorine	Concentration no greater than 0.1 gm ⁻³
pH	Within the range 6.0 to 9.0

4. The consent holder shall ensure that there is always clear and safe foot access to the point where the discharge enters the Patea River.
5. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2022 and/ or June 2028, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 24 June 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
PO Box 320
Stratford 4352

Decision Date: 25 September 2017

Commencement Date: 16 October 2017

Conditions of Consent

Consent Granted: To take and use water from the Patea River and the Konini Stream to provide a public water supply to Stratford

Expiry Date: 1 June 2034

Review Date(s): June 2019 and 3-yearly intervals thereafter

Site Location: Cardiff Road, Cardiff

Grid Reference (NZTM) 1706218E-5645354N (Patea intake & dam)
1705702E-5645109N (Konini intake & dam)

Catchment: Patea

Tributary: Paetahi
Konini

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. Subject to condition 2, the total rate of taking shall not exceed 61 litres per second, and:
 - (a) the rate of taking from the Konini Stream shall not exceed 20 litres per second; and
 - (b) when the flow in the Patea River at the 'Skinner Road' flow site has, at some time on each of the three previous days, been less than 780 litres per second the rate of taking from the Patea River shall not exceed 41 litres per second.
2. The total rate of taking may be up to 81 litres per second, with no more than 20 litres per second taken from the Konini Stream, if taking at that rate is necessary to replenish the reservoir following a plant failure.
3. If taking exceeds 61 litres per second as provided for by condition 2 the consent holder shall immediately notify the Chief Executive, Taranaki Regional Council. Notification shall include the details of the plant failure and be emailed to worknotification@trc.govt.nz.
4. When the flow in the Patea River, measured at Skinner Road is less than 780 litres per second the consent holder shall implement water conservation measures to reduce water demand, and when the flow has, at some time on each of the three previous days, been less than 556 litres per second the taking of water shall be restricted to the minimum amount necessary to maintain the health of people and animals (i.e. garden watering and other non-essential uses are prohibited).
5. The consent holder shall ensure that regular low flow gaugings are undertaken near to each of the take sites, so that a reasonable estimate of mean annual low flow at each site can be made.
6. Before exercising this consent the consent holder shall install, and thereafter maintain a water meter at each site of taking (or a nearby site in accordance with Regulation 10 of the *Resource Management (Measurement and Reporting of Water Takes) Regulations 2010*. The water meter and associated equipment shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of $\pm 5\%$. Records of the date, the time and the rate and volume of water taken at intervals not exceeding 15 minutes, shall be made available to the Chief Executive, Taranaki Regional Council at all reasonable times.

Note: Water meters and recording equipment must be installed, and regularly maintained, in accordance with manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance meters and recording equipment have a limited lifespan.

Consent 0195-3.0

7. The consent holder shall provide the Chief Executive, Taranaki Regional Council with a document from a suitably qualified person certifying that water measuring and recording equipment required by the conditions of this consent ('the equipment'):
 - (a) has been installed and/or maintained in accordance with the manufacturer's specifications; and/or
 - (b) has been tested and shown to be operating to an accuracy of $\pm 5\%$.

The documentation shall be provided:

- (i) within 30 days of the installation of a water meter or datalogger;
 - (ii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the equipment may not be functioning as required by this consent; and
 - (iii) no less frequently than once every five years.
8. If any measuring or recording equipment breaks down, or for any reason is not operational, the consent holder shall advise the Chief Executive, Taranaki Regional Council immediately. Any repairs or maintenance to this equipment must be undertaken by a suitably qualified person and a maintenance report provided to the Chief Executive, Taranaki Regional Council within 30 days of the work occurring.
9. Any water meter or datalogger shall be accessible to Taranaki Regional Council officers at all reasonable times for inspection and/or data retrieval. In addition the data logger shall be designed and installed so that Taranaki Regional Council officers can readily verify that it is accurately recording the required information.
10. The records of water taken shall:
 - (a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;
 - (b) specifically record the water taken as 'zero' when no water is taken; and
 - (c) be transmitted to the Taranaki Regional Council's computer system within two hours of being recorded.
11. Each year the consent holder shall prepare a report detailing:
 - (a) the work done to detect and minimise leaks in the area supplied, and
 - (b) water use efficiency and conservation measures undertaken in the area supplied.

The report shall be provided to the Chief Executive, Taranaki Regional Council before 1 September each year and cover the previous 1 July to 30 June period.

Consent 0195-3.0

12. The consent holder shall mitigate or offset the environmental effects of the taking by making four annual payments of \$10,000 (plus GST) to the Taranaki Regional Council as a financial contribution for the purpose of funding environmental enhancement projects. The environmental enhancement projects are, to be in the upper Patea River catchment, and would include:
 - (a) fencing, planting, creation and enhancement of wetlands; and
 - (b) riparian planting, with first and second order streams as a priority.

The amount to be paid shall be adjusted annually according to the consumer price index, or similar, to account for the effects of inflation, and be made no later than 1 September each year.
13. The consent holder shall ensure that the intakes are designed and located to avoid fish entering the intake or being trapped against the screen.
14. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019 and at 3-yearly intervals thereafter, for the purposes of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 25 September 2017

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of Consent Holder: Stratford District Council
P O Box 320
STRATFORD 4352

Decision Date [Change]: 24 May 2011

Commencement Date [Change]: 24 May 2011 [Granted: 9 June 2003]

Conditions of Consent

Consent Granted: To take water from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes at or about (NZTM) 1708930E-5650525N

Expiry Date: 1 June 2021

Review Date(s): June 2015

Site Location: Mountain Road, Midhirst

Legal Description: Lot 7 DP 14836 Blk XIII Huiroa SD [Site of take]

Catchment: Waitara

Tributary: Manganui
Te Popo

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The exercise of this consent shall be conducted in accordance with the information submitted in support of application nos. 84/51, 91/162, 2233 and 6750, and to ensure that the conditions of the consent are met at all times.
2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise any adverse effects on the environment as a result of the exercise of this consent.
3. The peak extraction rate shall not exceed 5 litres/second.
4. The amount of water taken in summer [1 November to 31 March] shall not exceed an average of 254 cubic metres/day during any calendar month.
5. The amount of water taken in winter [1 April to 31 October] shall not exceed 432 cubic metres/day.
6. The amount of water taken during any year ending 30 June shall not exceed 90,000 m³.
- 6.7. The consent holder shall, on an annual basis, provide a report detailing:
 - a) the work done to detect and minimise leaks in the area supplied, and
 - b) water use efficiency and conservation measures undertaken in the area supplied.

The report shall be provided to the Chief Executive, Taranaki Regional Council before 1 September each year and cover the previous 1 July to 30 June period. The first report shall be provided by 1 September 2011.

- 7.8. All intake structures shall be screened to avoid the entrainment of fish.

Consent 1276-3

- 8.9. The consent holder shall install and operate a measuring device capable of accurately recording daily rates of abstraction and shall measure, record and make such records available to the Chief Executive, Taranaki Regional Council, upon request.
- 9.10. That the Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the stream, in accordance with 329 of the Resource Management Act 1991.
- 10.11. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2009 and/or June 2015 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 24 May 2011

For and on behalf of
Taranaki Regional Council

Director-Resource Management

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
PO Box 320
Stratford 4352

Decision Date: 27 May 2016

Commencement Date: 27 May 2016

Conditions of Consent

Consent Granted: To discharge treated filter backwash water from the Midhirst Water Treatment Plant onto land via a soak hole

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027

Site Location: Midhirst Water Treatment Plant, Mountain Road, Midhirst

Grid Reference (NZTM) 1708926E-5650535N

Catchment: Waitara

Tributary: Manganui
Te Popo

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

Consent 1331-3.0

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The discharge shall not exceed 10 cubic metres per day.
2. The consent holder shall maintain and operate the soak hole system in a manner that will ensure that the discharge does not cause the soak hole to overflow.
3. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during June 2021 and/or June 2027, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 27 May 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
 P O Box 320
 STRATFORD

Consent Granted 17 June 2005
Date:

Conditions of Consent

Consent Granted: To take and use groundwater from a bore in the vicinity of
 the Toko Stream in the Patea catchment for Toko rural
 water supply purposes at or about GR: Q20:298-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: East Road, Toko

Legal Description: Lot 1 DP 15670 Blk III Ngaere SD

Catchment: Patea

Tributary: Toko

Consent 1337-3

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 2743 and shall ensure efficient and effective use of water. In the case of any contradiction between the documentation submitted in support of application 2743 and the conditions of this consent, the conditions of this consent shall prevail.
3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least seven days prior to the exercise of this consent.
4. The volume of groundwater abstracted shall not exceed 80 cubic metres per day at a rate not exceeding 5.6 litres per second.
5. The consent holder shall install and operate a device capable of accurately recording daily rates of abstraction and shall measure, record and make such records available to the Chief Executive, Taranaki Regional Council, upon request.
6. This consent shall lapse on the expiry of five years after the date of issue of this consent, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 1337-3

7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 17 June 2005

For and on behalf of
Taranaki Regional Council

Director-Resource Management

TRK982452

WATER PERMIT

**Pursuant to the RESOURCE MANAGEMENT ACT 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

Name of
Consent Holder: STRATFORD DISTRICT COUNCIL
PO BOX 320 STRATFORD

Renewal
Granted Date: 20 July 1998

CONDITIONS OF CONSENT

Consent Granted: TO DAM THE KONINI STREAM A TRIBUTARY OF THE
PAETAHI STREAM IN THE PATEA CATCHMENT FOR THE
STRATFORD TOWN WATER SUPPLY AT OR ABOUT GR:
Q20:155-068

Expiry Date: 1 June 2016

Review Date[s]: June 2004 and June 2010

Site Location: CARDIFF ROAD, STRATFORD

Legal Description: DP3278 PT SEC 25 PT DP3759 SECS 25 & 26 BLK IV
KAUPOKONUI SD

Catchment: PATEA 343.000

Tributary: PAETAHI 343.310
KONINI 343.311

For General, Standard and Special Conditions pertaining to this consent please see reverse side of this document.

TRK982452

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

- 1. THAT the consent holder shall maintain a structure at the weir to provide for the unrestricted passage of native fish, juvenile and adult trout.
- 2. THAT the consent holder shall monitor the effectiveness of the fish pass in providing for the passage of adult trout.
- 3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 20 July 1998

For and on behalf of
TARANAKI REGIONAL COUNCIL

DIRECTOR—RESOURCE MANAGEMENT

Land Use Consent
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
PO Box 320
Stratford 4352

Decision Date: 25 September 2017

Commencement Date: 25 September 2017

Conditions of Consent

Consent Granted: To dam water in the Konini Stream with a 1 metre concrete weir for the Stratford town water supply

Expiry Date: 1 June 2034

Review Date(s): June 2019 and at 3-yearly intervals thereafter

Site Location: Cardiff Road, Cardiff

Grid Reference (NZTM) 1705702E-5645109N

Catchment: Patea

Tributary Paetahi
Konini

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall maintain the weir so that it remains sound and fit for purpose.
2. The consent holder shall repair any erosion or scour of the river bed or banks caused by the weir and take reasonable steps to stop it recurring.
3. The weir shall not restrict the passage of native fish or juvenile or adult trout.
4. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019 and at 3-yearly intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 25 September 2017

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Land Use Consent

**Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Change To
Conditions Date: 22 March 2000 [Granted: 20 July 1998]

Conditions of Consent

Consent Granted: To dam the Patea River for the Stratford town water supply
at or about GR: Q20:163-070

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Cardiff Road, Cardiff, Stratford

Legal Description: River Reserve Blk I Ngaere SD

Catchment: Patea

Consent 5353-1

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. THAT the consent holder shall design and install a structure at the weir to provide for the unrestricted passage of fish. The species of fish that the fish pass is to be designed for shall be determined prior to its installation, to the approval of the General Manager, Taranaki Regional Council.
2. THAT the fish pass structure, required by condition 1, shall be constructed by 1 July 2005, and thereafter be maintained and operated to the satisfaction of the General Manager. In constructing the fish pass structure, there shall be no disturbance of any part of the bed covered by water between 1 May and 31 October.
3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this consent, which either were not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 22 March 2000

For and on behalf of
Taranaki Regional Council

Director-Resource Management

Land Use Consent
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
PO Box 320
Stratford 4352

Decision Date: 25 September 2017

Commencement Date: 25 September 2017

Conditions of Consent

Consent Granted: To dam water in the Patea River with a 2.3 metre concrete weir for the Stratford town water supply

Expiry Date: 1 June 2034

Review Date(s): June 2019 and at 3-yearly intervals thereafter

Site Location: Cardiff Road, Cardiff

Grid Reference (NZTM) 1706218E-5645354N

Catchment: Patea

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall maintain the weir so that it remains sound and fit for purpose.
2. The consent holder shall repair any erosion or scour of the river bed or banks caused by the weir and take reasonable steps to stop it recurring.
3. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019 and at 3-yearly intervals thereafter, for the purpose of:
 - (a) ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or
 - (b) include conditions relating to fish passage, including a requirement to install a fish pass, if relocation of native species does not result in established populations upstream of the weir.

Signed at Stratford on 25 September 2017

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Land Use Consent
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 31 January 2005

Conditions of Consent

Consent Granted: To repair and maintain an existing weir structure in the
Konini Stream a tributary of the Paetahi Stream in the
Patea catchment at or about GR: Q20:157-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: Cardiff Road, Cardiff, Stratford

Legal Description: Pt Secs 25 DP 3759 Blk IV Kaupokonui SD

Catchment: Patea

Tributary: Paetahi
Konini

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the commencement and upon completion of the initial activity and again prior to and upon completion of any subsequent maintenance works which would involve disturbance of or deposition to the riverbed or discharges to water.
2. Any instream works shall take place only between 1 November and 30 April inclusive, except where this requirement is waived in writing by the Chief Executive, Taranaki Regional Council.
3. The consent holder shall adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise the discharge of silt or other contaminants into water or onto the riverbed and to avoid or minimise the disturbance of the riverbed and any adverse effects on water quality.
4. The consent holder shall ensure that the area and volume of riverbed disturbance shall, so far as is practicable, be minimised and any areas which are disturbed shall, so far as practicable, be reinstated.
5. The exercise of this consent shall be under taken generally in accordance with the documentation submitted in support of application 3542. In the case of any contradiction between the documentation submitted in support of application 3542 and the conditions of this consent, the conditions of this consent shall prevail.
6. The structure[s] which are the subject of this consent shall not cause erosion of the river channel, and measures shall be taken by the consent holder to prevent erosion of the river channel.
7. After allowing for reasonable mixing, being a mixing zone extending seven times the width of the Konini Stream at the point of discharge, any discharge of contaminants shall not give rise to any of the following effects in the Konini Stream:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;

Consent 6549-1

- c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.
8. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 31 January 2005

For and on behalf of
Taranaki Regional Council

Director-Resource Management

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

- 1. The discharge shall not exceed 15 cubic metres per day.
- 2. The consent holder shall maintain and operate the soak hole system in manner to ensure that the discharge does not cause the soak hole to overflow.
- 3. The discharge shall not exceed 0.1 g/m³ free available chlorine at any time.
- 4. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during June 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 27 May 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
PO Box 320
Stratford 4352

Decision Date: 24 June 2016

Commencement Date: 24 June 2016

Conditions of Consent

Consent Granted: To discharge settled filter backwash water from the Stratford Municipal Water Treatment Plant via a settling pond into the Patea River

Expiry Date: 1 June 2034

Review Date(s): June 2022, June 2028

Site Location: 296 Cardiff Road, Cardiff

Grid Reference (NZTM) 1706560E-5645161N

Catchment: Patea

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of contaminants from the site.
2. After allowing for a mixing zone of 50 metres downstream of the discharge point (at approximately 1706560E-5645161N), the discharge shall not give rise to any of the following effects in the Patea River:
 - (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - (b) any conspicuous change in the colour or visual clarity;
 - (c) any emission of objectionable odour;
 - (d) the rendering of fresh water unsuitable for consumption by farm animals; and
 - (e) any significant adverse effects on aquatic life.
3. Constitutes of the discharge shall meet the standards shown in the following table.

Constituent	Standard
Suspended solids	Concentration not greater than 20 gm ⁻³
Free available chlorine	Concentration no greater than 0.1 gm ⁻³
pH	Within the range 6.0 to 9.0

4. The consent holder shall ensure that there is always clear and safe foot access to the point where the discharge enters the Patea River.
5. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2022 and/ or June 2028, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 24 June 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management